



# PUBLIC NOTICE

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## COMMENT SOUGHT ON BROADBAND ADOPTION NBP Public Notice # 16

### PLEADING CYCLE ESTABLISHED

GN Docket Nos. 09-47, 09-51, 09-137

**Comment Date: December 2, 2009**

The American Recovery and Reinvestment Act of 2009 (Recovery Act)<sup>1</sup> directs the Commission to create the National Broadband Plan (NBP) by February 17, 2010, to ensure that every American has access to broadband capability and to establish benchmarks for meeting that goal.<sup>2</sup> Closely related to the provision of broadband access are broadband adoption and usage, by which consumers can be empowered to utilize broadband connections for job creation, economic development, health care, education, civic engagement, and other purposes beneficial to the nation and society.

While broadband adoption rates have increased in the United States in recent years, the United States remains behind other developed nations with an overall home broadband adoption rate of 63% of adults and with adoption rates for some demographic groups significantly below that average.<sup>3</sup> Successful efforts to increase broadband adoption will spur additional demand for access, in addition to ensuring effective utilization of both existing and newly deployed access by consumers as envisioned by the Recovery Act. In this Public Notice, we seek comment on measuring broadband adoption, quantifying the individual costs to non-adopters, measuring the cost to society of having a large group of non-adopters, and identifying and remedying barriers to adoption. We also seek data about existing adoption programs and studies, in order to contribute to and facilitate the Commission's development of the NBP pursuant to the Recovery Act.

- 1. Measuring broadband adoption.** The Recovery Act requires that the NBP include a detailed strategy for achieving maximum utilization of broadband infrastructure and service. Maximum utilization can only be achieved by increasing broadband adoption rates. As the

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<sup>1</sup> American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009) ("Recovery Act"). See also Section 706 Sixth Report NOI; *Comment Sought on International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act*, GN Docket No. 09-47, Public Notice, 24 FCC Rcd 3908 (2009).

<sup>2</sup> Recovery Act § 6001(k).

<sup>3</sup> See Pew Internet & American Life Project, Home Broadband Adoption 2009, at 3-4 (2009), available at <http://www.pewinternet.org/~media/Files/Reports/2009/Home-Broadband-Adoption-2009.pdf> (2009 Pew Broadband Adoption Study).

Commission establishes goals to maximize utilization of broadband, how should we measure adoption? Adoption statistics often focus on individual or household subscription rates. Is that the best way to measure adoption? If not, what are the alternatives?

- a. Is someone who frequently accesses broadband at work or in the library, but not at home, an “adopter?” Is the use of a web-enabled smart phone sufficient to make someone an “adopter” of broadband?
- b. Should adoption be measured more by the manner, type or frequency of use of certain types of applications? If so, will those applications be standard across all groups of people?
- c. If we measure adoption using some metric or combination of metrics other than home penetration, how can we benchmark improvements over time?

**2. Cost of digital exclusion.** The Commission would like to understand the costs faced by individual consumers who do not adopt broadband as well as the societal costs of having a large portion of society that remains un-connected to broadband.

- a. How can the Commission best quantify the costs faced by non-adopters?
- b. Do these costs vary by demographic or other factors?
- c. Which of these costs absolutely depend on broadband technology rather than access to the Internet more generally?
- d. Which of these costs absolutely depend on access at home (fixed or mobile)?
- e. Are there certain minimum hardware requirements necessary for an individual to overcome the costs of exclusion?
- f. What societal benefits are foregone, when a large group of the population has not adopted broadband? We seek input on how to frame this issue (what are the categories of societal costs and benefits) and how to measure it.

**3. Barriers to adoption.** The Commission wishes to further understand the reasons why some consumers, who have access to broadband, do not adopt. The 2009 Pew Broadband Adoption Study found, generally, that relevance, price, availability, and usability were the main reasons cited for not using broadband at home.<sup>4</sup> Based on this and other research and comments filed in the record, the Commission believes that the primary barriers non-adopters face include: affordability of service, affordability of hardware, insufficient digital and technical literacy levels, unawareness of the personal relevance and utility of broadband technology and online content and an inability to use existing technology and applications due to physical or mental disabilities.<sup>5</sup>

- a. Is this an accurate and comprehensive list of barriers faced by non-adopters?
- b. Do concerns about consumer protection such as privacy/anonymity, ID theft, child protection, viruses and data preservation, etc. pose a significant barrier to adoption?
- c. Are non-adopters influenced by a lack of clear, accurate, and sufficient information available to them about broadband service offerings and price?
- d. Which groups are least likely to understand the relevance of broadband? For groups that already understand the relevance but face other barriers, how did they become aware of the relevance and benefit of broadband to their lives?

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<sup>4</sup> 2009 Pew Broadband Adoption Study.

<sup>5</sup> See, e.g., The Advanced Communications Law & Policy Institute, New York Law School, Barriers to Broadband Adoption: A Report to the Federal Communications Commission, *available at* [http://www.nyls.edu/user\\_files/1/3/4/30/83/ACLP%20Report%20to%20the%20FCC%20-%20Barriers%20to%20BB%20Adoption.pdf](http://www.nyls.edu/user_files/1/3/4/30/83/ACLP%20Report%20to%20the%20FCC%20-%20Barriers%20to%20BB%20Adoption.pdf); Comments of Intel Corporation (June 8, 2009); Comments of Verizon and Verizon Wireless, Report on Rural Broadband Strategy, GN Docket No. 09-29, at 3 (March 25, 2009).

- e. How do these and other barriers affect specific populations or demographic groups and to what extent do specific populations or demographic groups face multiple barriers?<sup>6</sup>
- f. In proposing recommendations to address these barriers, should the Commission prioritize among barriers? For example, should the Commission prioritize based on the amount of resources needed to address the barrier? Is there a better way to prioritize recommendations?

**4. Overcoming barriers to adoption.** As the Commission develops recommendations to maximize broadband adoption and utilization how can it remedy each barrier faced by non-adopters?

- a. Many parties have suggested that the Commission utilize the Lifeline and Link Up programs to support broadband connection charges, devices and service costs for low-income consumers.<sup>7</sup> What other specific federal policies or programs to address affordability of service and hardware should the Commission consider recommending?<sup>8</sup>
  - i. Should the Federal government support the cost of broadband service and associated hardware for low-income consumers through vouchers, tax incentives, or low interest loans? Should support or tax incentives be aimed at consumers, service providers, hardware providers or other parties?<sup>9</sup>
  - ii. Many broadband providers bundle service offerings. How should bundled services be taken into account in developing recommendations focused on the affordability of broadband service?
  - iii. Should the Federal government offer a broadband hardware purchase program, similar to computer purchase programs offered by other countries through which the government would purchase hardware aggregately at a discount and then re-sell the hardware to low-income consumers?<sup>10</sup> Should the government encourage state governments, private industry or other parties to offer such programs?

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<sup>6</sup> The Commission has recently sought comment on adoption issues unique to Tribal communities and persons with disabilities. Parties do not need to repeat comments already incorporated in responses to those public notices.

<sup>7</sup> See, e.g., *AT&T Comments on the National Broadband Plan NOI*, at 48-51; *AT&T Reply Comments on the National Broadband Plan NOI*, at 15-16; *T-Mobile Comments on the National Broadband Plan NOI*, at 25; *Dell Comments on the National Broadband Plan NOI*, at 3.

<sup>8</sup> The Commission will be releasing a Public Notice seeking additional comments on reform of the Universal Service Fund, and we will seek additional comment establishing Broadband Lifeline and Link Up programs at that time.

<sup>9</sup> Cox Communications suggests subsidizing consumers, rather than providers, to ensure consumer control and selection and to prevent any potential program disqualification based on being a current customer. See *Cox Comments on the National Broadband Plan NOI*, at 6. One Economy Corporations suggests expanding the New Market Tax Credit Program to include investments in broadband access and permit tax payers to receive a credit against federal income taxes for making qualified equity investments in designated Community Development Entities, which in turn must be used to provide investments in low income communities. See *Comments of One Economy Corporation on the National Broadband Plan NOI*, at 24.

<sup>10</sup> The Korean government initiated a “PC for Everyone” program to provide PCs at low prices, partly through a PC purchase installment saving system. In a later initiative, the Korean government itself purchased 50,000 PCs under a four-year lease, providing them to low-income families. See Kenji Kushida and Seung-Youn OH, *Understanding South Korea’s and Japan’s Spectacular Broadband Development: Strategic Liberalization of the Telecommunications Sectors*, June 2006. Available at <http://brie.berkeley.edu/publications/wp175.pdf>.

- iv. Should the federal government find ways to incentivize private hardware donations? What are the benefits and limitations of refurbished hardware programs?
  - v. Should programs aimed at reducing the cost of hardware be limited to certain types of hardware?
  - vi. How else can broadband hardware and service be made more affordable to low-income consumers?
- b. Many non-adopters report that they do not have the skills to use broadband.<sup>11</sup> What programs and policies should the federal government adopt to educate consumers and increase technology and digital literacy skills to ensure that individuals have sufficient ability to use hardware and navigate and process digital information and broadband-enabled applications?
- i. Should the government establish nationwide standards for digital literacy? How would such standards be measured?
  - ii. Many states have started to implement digital literacy standards and curricula. Should the federal government do more to standardize these initiatives? How can the federal government ensure that individuals no longer in school acquire and maintain these skills?
  - iii. Should the federal government create a national digital literacy corps comprised of individuals who conduct outreach and training programs in communities with very low adoption rates?<sup>12</sup>
  - iv. Should some sort of national help desk be created to assist individuals with basic technical questions?
- c. The Pew study found that 50% of non-adopters cite reasons that can be classified as lack of relevance as their primary reason for not using broadband.<sup>13</sup> Should the federal government do more to help non-adopters understand how broadband is relevant to them?
- i. Would a federal outreach campaign utilizing multiple types of media to disperse information about broadband, including its relevance and utility, be effective in increasing adoption and usage rates?<sup>14</sup> What are the best mechanisms to reach specific groups of non-adopters? Are certain types of media more effective than others? Are there community institutions or other organizations who could serve as effective partners to help reach particular groups with below average adoption rates (including but not limited to:

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<sup>11</sup> 2009 Pew Broadband Adoption Study at 41-42. User responses classified as indicative of having insufficient skills include, for example: “too old to learn, difficult and just don’t know how.”

<sup>12</sup> See, e.g., Letter from Rey Ramsey, Chief Executive Officer, One Economy Corporation, to Julius Genachowski, Chairman, FCC (Nov. 3, 2009) (One Economy Nov. 3, 2009 *Ex Parte*) (proposing a National Digital Literacy Initiative).

<sup>13</sup> 2009 Pew Broadband Adoption Study at 41-42. User responses classified as indicative of not believing broadband is relevant include, for example: “not interested in getting on-line, nothing could get me on-line or to switch from dial-up, too busy, or ‘other.’”

<sup>14</sup> Qwest suggests that the Commission should focus on program outreach efforts to and by state, local and tribal agencies and provide funding to support cooperative outreach and streamlined enrollment processes. See *Qwest Comments on the National Broadband Plan NOI*, at 15. Time Warner Cable supports the use of Federal funds to support broadband demand-side programs, with a focus on outreach and education, subsidies for low-income customers, and programs to distribute laptops to low-income schools and families. See, *TWC Comments on the National Broadband Plan NOI*, at 20-21; *TWC Reply Comments on the National Broadband Plan*, at 16.

- seniors, low-income, African-Americans, non-English speaking, Tribal, persons with disabilities)?
- ii. What types of messaging should a federal outreach campaign include? Would the inclusion of information about how to protect individual privacy and against other online risks in such a campaign be effective in increasing adoption and usage rates?
  - iii. What, if any, information about broadband would be better dispersed at the state, local or Tribal level?
  - iv. How can the Federal government, private industry, and other governmental and non-governmental entities help spur the creation of relevant content and applications for population and demographic groups that include high rates of non-adoption?<sup>15</sup>
- d. For each program or policy recommendation above or newly proposed, please consider and comment on the following issues:
- i. Are there existing federal programs that can be modified to implement the recommendation?
  - ii. What would the program cost to implement, and what expenses would be covered by the program?
  - iii. How should these programs be funded? Are there other federal expenditures that broadband adoption and use could reduce or eliminate to defray some or all of the costs of new programs?
  - iv. Should eligibility to participate be limited to certain populations, and if so, how?
  - v. If new federal programs and policies need to be established, what are they, and which federal agencies or departments are best positioned to administer these programs or policies?
- e. What role should state, local or Tribal governments have in developing and administering adoption programs and how should the federal government encourage such involvement?
- f. What role should private industry have in developing and administering adoption programs and how should the federal government encourage such involvement?
- g. What role should non-profits have in developing and administering adoption programs and how should the federal government encourage such involvement?
- h. How should the success of each program or policy be measured, what data is necessary to evaluate success and how should such data be collected?

**5. Learning from existing programs.** As we consider which recommendations to maximize adoption and utilization should be included in the National Broadband Plan, the Commission would like to rely on data and lessons learned from existing demand stimulation efforts. The Commission asks all parties to submit any quantitative data, studies, or analyses regarding both successful and unsuccessful programmatic efforts to address broadband adoption and usage. Although anecdotal information may be helpful, such data beyond anecdotal information will better enable the Commission to make specific policy recommendations. For each program, please address, where possible:

- a. What are the program goals? Does the program focus on a specific barrier, such as digital literacy, or does it address multiple barriers, for example, by providing free or

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<sup>15</sup> See, e.g., *Broadband Diversity Comments on the National Broadband Plan NOI*, at 34-35; *ZeroDivide Comments on the National Broadband Plan NOI*, at 7; *BOC Comments on the National Broadband Plan NOI*, at 18-19; and *AT&T Reply Comment to the National Broadband Plan NOI*, at 16.

discounted equipment and service in conjunction with skills training and education about relevance?

- b. What state, local or Tribal governmental entities were involved? What entities from the private and non-profit sectors were involved?
- c. How successful has the program been, and how was success measured?
- d. For programs that include digital literacy training, what is the curriculum? Which of the following categories of digital literacy subject matter are addressed by the program?
  - i. hardware usage
  - ii. software and applications usage
  - iii. web navigation
  - iv. managing and assessing the quality of online content
  - v. purchase of hardware (specs) and broadband service that fit the program participant's technology needs and budget
- e. If the program is focused on digital literacy or includes specific content or applications is it customized for particular groups?
- f. How many consumers and what size community are served by the program? Is the program focused on particular demographics or special groups, such as the elderly, persons with disabilities, Indian tribe members, or non-English-speaking populations, or is it offered to the general public?
- g. To how many participants and to what size community or geographic area could this program be effectively scaled, if at all?
- h. What are the program costs, in total and per participant? What is provided for these costs? For example, do these costs cover any equipment that participants may take home with them, either during the program's duration or permanently?
- i. What challenges did the program experience?
- j. What, if any, consensus is there among existing adoption programs, locally or nationally, on best practices for participant success and for increasing adoption rates?

This matter shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's ex parte rules. *See* 47 C.F.R. §§ 1.1200, 1.1206. Persons making oral ex parte presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one- or two-sentence description of the views and arguments presented generally is required. *See* 47 C.F.R. § 1.1206(b). Other rules pertaining to oral and written ex parte presentations in permit-but-disclose proceedings are set forth in section 1.1206(b) of the Commission's rules, 47 C.F.R. § 1.1206(b).

**All comments should refer to GN Docket Nos. 09-47, 09-51, and 09-137. Please title comments responsive to this Notice as "Comments – NBP Public Notice # 16." Further, we strongly encourage parties to develop responses to this Notice that adhere to the organization and structure of the questions in this Notice.**

Comments may be filed using (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies.<sup>16</sup> Comments can be filed through the Commission's ECFS filing interface located at the following Internet address: <http://www.fcc.gov/cgb/ecfs/>. Comments can also be filed via the Federal eRulemaking Portal:

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<sup>16</sup> *See* Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (1998).

<http://www.regulations.gov>.<sup>17</sup> Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties who choose to file by paper must file an original and four copies of each filing.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class mail, Express Mail, and Priority Mail should be addressed to 445 12th Street, S.W., Washington, D.C. 20554.

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For further information about this Public Notice, please contact Randy Clarke, at (202) 418-1500.

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<sup>17</sup> Filers should follow the instructions provided on the Federal eRulemaking Portal website for submitting comments.